60p

THE Unexplained

MYSTERIES OF MIND SPACE & TIME

84

Mind over body
Beast of Gévaudan
'Windows' explained?
The waiting future
Earth's pole vault

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THE Unexplained
MYSTERIES OF MIND SPACE & TIME

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Contents

Mind over matter
EVERY MAN A SUPERMAN 1661
In a special article we look at the various mental techniques used to acquire remarkable physical powers
David Harvey

Time
THE WAITING FUTURE 1666
What do we mean by the past, the present and the future? How does precognition help us understand time?
Archie Roy

Pole reversal
THE ENDS OF THE EARTH 1670
We explore the reasons why the Earth's magnetic field is capable of spontaneously reversing itself
Nigel Henbest

Window areas
LIGHT THROUGH THE WINDOW 1674
Does geomagnetism hold the answer to the riddle of 'windows' that reach into the unknown?
Jenny Randles

Beast of Gévaudan
THE RAVENING BEAST 1678
The 'thing' that seemed invulnerable to bullets and terrorised a French district in the 1760s
Gregory Pons

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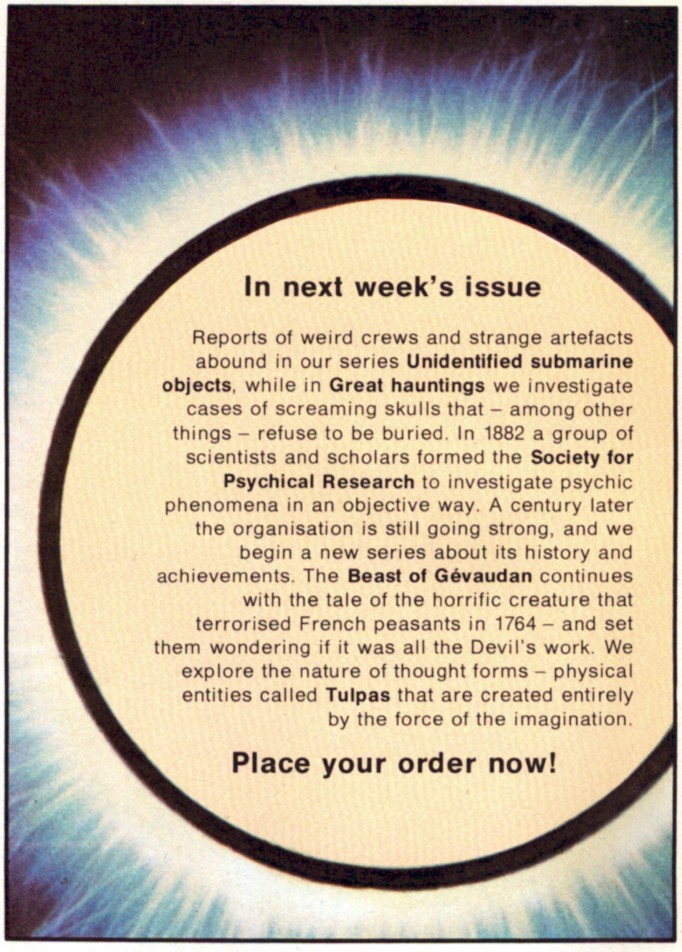

In next week's issue

Reports of weird crews and strange artefacts abound in our series **Unidentified submarine objects**, while in **Great hauntings** we investigate cases of screaming skulls that – among other things – refuse to be buried. In 1882 a group of scientists and scholars formed the **Society for Psychical Research** to investigate psychic phenomena in an objective way. A century later the organisation is still going strong, and we begin a new series about its history and achievements. The **Beast of Gévaudan** continues with the tale of the horrific creature that terrorised French peasants in 1764 – and set them wondering if it was all the Devil's work. We explore the nature of thought forms – physical entities called **Tulpas** that are created entirely by the force of the imagination.

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Every man a superman

Can people really be buried alive and survive – or use the mind to help the body withstand freezing temperatures – or demolish a pile of bricks with the hand? DAVID HARVEY gives evidence that the astounding power of the mind can push the body to new limits

IT CAN GIVE YOU the strength to demolish a pile of bricks, the means to kill people without touching them, the ability to raise your sports performance to new heights or the will to regain your health. It is the power of the mind – and that power is formidable and remarkable. Evidence is mounting that the mind-body relationship, or psychosomatic link as medicine calls it, is deeper and more active than we had thought in the West. Studies of meditation, deep relaxation and other forms of mind expansion practices have yielded new information that is helping us to understand this mind and body interrelationship better. It is a slow process of exploration, however, because the West still has no commonly accepted definitions of mind and consciousness and no philosophical basis for beliefs of their interplay. This uncertainty is probably the reason why science has felt uneasy, not to say downright uncomfortable, when confronted with some of the mind's more spectacular feats.

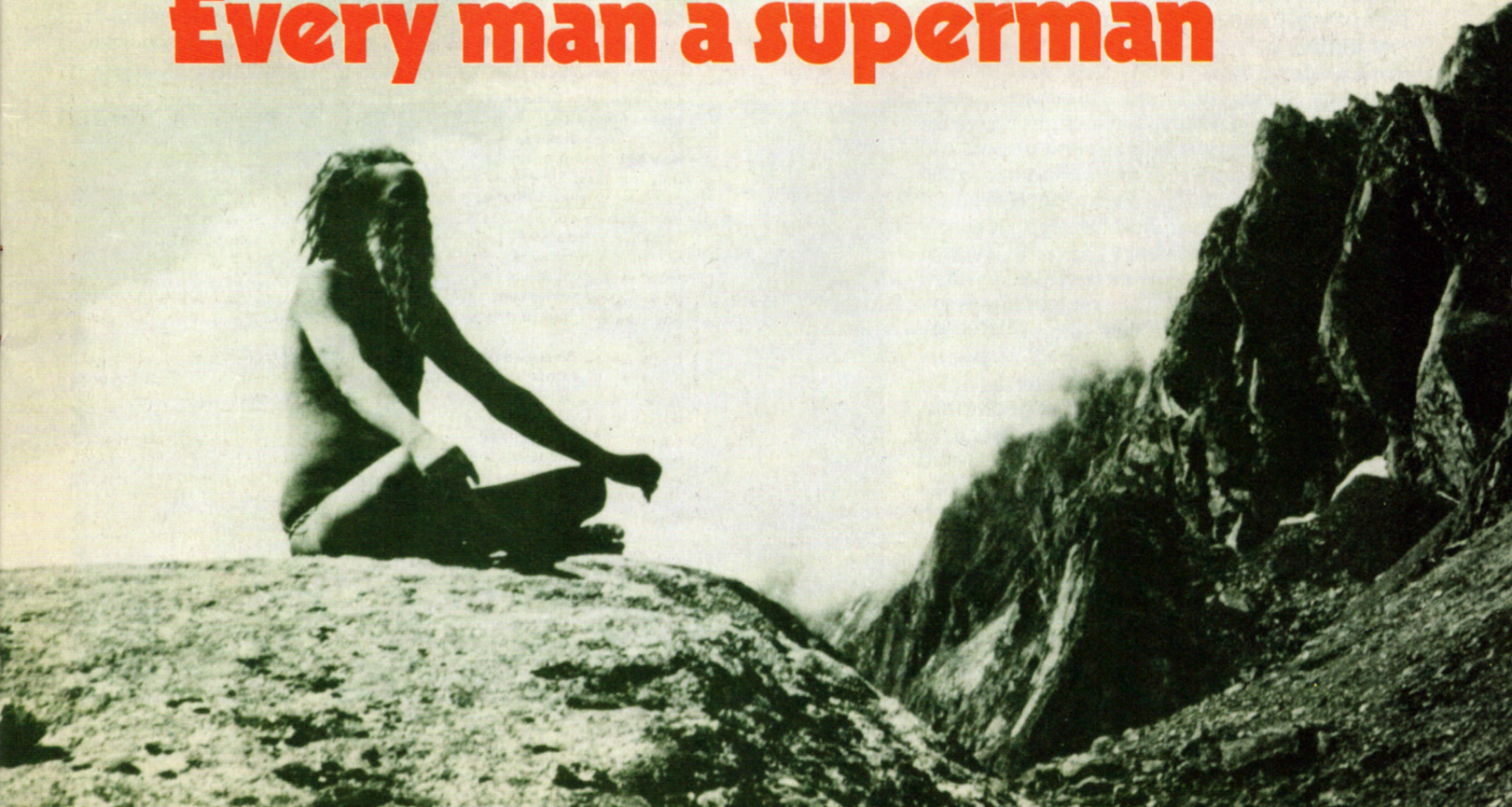
Dr James Braid, a Scottish ophthalmic surgeon, ran into this scientific bias in the 1840s – the days before anaesthesia – when he said that people could undergo painless surgery: he proposed the use of hypnosis. His medical colleagues scoffed and sneered. Even after hypnosis had been successfully used over a period of time, many doctors simply refused to believe it was possible to control pain through the mind. As soon as pain-killing drugs were developed, they leapt to popularity and today are the most commonly used anaesthetic. But stories still surface of the success of hypnosis in difficult cases and it has won acceptance as a therapy for pain control by dentists in particular.

Above: karate being used to demolish a building – a peaceful application of a deadly martial art

Below: an Eastern mystic meditates. Meditation is a discipline of the mind that is now widely recognised in the West as being effective against stress

Hypnotism is by no means the only condition under which the mind can induce physical changes. The West is waking up to the way in which the mind can work wonders on the physical level.

One of the spurs to the current upsurge in



experimentation and investigation of mind over body has been the interest in Eastern philosophies and techniques of self-mastery. Western scientists have even investigated and validated many claims made for meditation and other Eastern disciplines, measuring how far disciples can control heart rate and other autonomic functions, for example. This scientific proof of such control actually adds to the amazement inspired by some of the feats of the adepts. We can begin to see how far the human body can be pushed, though many of the demonstrations are sensational enough to stretch credibility to its limits.

To show how finely they are able to regulate their autonomic functions, some yogis have stayed buried in airtight boxes for a period of days. While anyone else would have suffocated within hours, they managed to eke out the available air supply by reducing their heart rate and breathing to a barely detectable tick-over level. Such a level of control is gained only after years – often nearly a lifetime – of disciplined training.

The Tibetan practice of *tumo* is another source of wonderment in regard to bodily control. The goal of tumo is to allow disciples to withstand the intense cold of their climate, and the training is a long programme of meditation and breathing exercises. Part of this training involves the visualisation of an internal fire as the only source of warmth during meditation in the icy Tibetan climes. How effectively this art of self-heating internally has been mastered is tested in the most demanding way.

On a given cold and windy night, each student is draped in a sheet that has been soaked in icy water. The initiate is required to dry out this sheet with his own body heat – not once but three times in succession. After this test, the final one of the training, the adept wears nothing more than a single cotton garment regardless of the season or the harshness of the conditions.

Superhuman prowess is also associated with many of the schools of Eastern martial arts, which cultivate the same kind of self-awareness and self-mastery as religious and spiritual schools. The object of the martial arts is to enable practitioners to perform feats of strength and acts of combat beyond ordinary limits. According to some accounts, martial arts training creates the ability to tap into some secret power source. But mostly

Above left: a surgeon operates on an hypnotised patient while the hypnotist (left) looks on. The mind-over-body technique of hypnotism has gained respectability among many orthodox doctors

Below: a group of Japanese Buddhists pour icy water over themselves in the bitter cold of a Tokyo winter. Mental training enables them to do this without ill effect

In his film *Enter the dragon*, Bruce Lee smashes an enemy with a kung fu blow. Kung fu is one of many martial arts that develop physical powers through mental training

this energy source is seen as accessible to everyone through techniques of training that aim to unify the mind and body. The Japanese call this extraordinary energy *ki*.

The methods for developing *ki* may differ in detail but in general they all have in common the five elements of relaxation, concentration, breathing exercises, emptying the mind of thought, and rhythmic activity. Some teachers say that there are three stages towards mastery of the energy *ki*. In the first stage, the individual achieves a centralisation of *ki*. In the second, the influence of the energy can reach out beyond one individual to touch others. In the final stage, the master gets in touch with what is believed to be the very centre of life – a stage rarely reached by anyone.

As more and more is written on the martial arts, many stories of paranormal feats come to light. Some of these have been witnessed by observers who testify to their truth. In a public demonstration, Bruce Lee – kung fu master and international film star – showed remarkable powers that went nearly beyond the believable. Standing with his right foot forward and his right arm almost fully extended to within an inch (2.5 centimetres) of a man, he struck. Yet, though it is accepted that it is physically impossible to generate enough power to hurt someone from this position, Lee sent the man flying.

Moreshei Uyeshiba, founder of aikido, is reputed to have successfully moved a boulder that had defeated the efforts of 10 labourers. Explaining this and similar feats, he says, 'I taught myself that an extraordinary spiritual power or soul power lies within a human body.'

Demonstrations of strength might appear pointless to many, but the karate expert's demolition of a pile of bricks cannot but impress. The feat bears testimony to the effectiveness of mental training in honing physical performance of all kinds.

The mind can even kill while a person under attack remains untouched. It can work its own lethal effect so that people think or worry themselves to death. In cultures where witchcraft is practised, a curse is almost always effective because the victim believes so strongly in the magic being worked.

In dismissing beliefs of this kind as mere superstition, the sophisticated Westerner overlooks the most important lesson implicit in witchcraft: suggestion, thought and imagination are unquestionably powerful weapons. If they can be used to kill, can they not be used to produce beneficial effects?

Emile Coué, a French psychotherapist,

Iron in the soul

There are many stories of superhuman feats in sports – of achievements that go beyond the physical prowess honed by exercise and practice, to unexplained forces. So far, no systematic study of the paranormal in sports has been made, but there is mounting evidence that success is often due to psychological factors – and maybe more.

Famous golf professionals in particular often talk about 'will' in helping them win. It was once said of Arnold Palmer that 'more than anything else, you get the feeling that he actually *willed* the ball into the hole.'

In his book on the game, American golfer Johnny Miller told about Bobby Nichols's special ability to come through in the crunch. Describing a contest between himself and Nichols he said: '. . . When he hit the ball I thought to myself, "There's no way that ball will get to the hole", it was going so slowly, it looked as if it would be a foot [30 centimetres] short. Then I heard Bobby say, "Get in", and it did.'

Jack Nicklaus is also credited with special powers of will. Writers and observers long felt that he could win 'whenever he wanted to', one going so far as to say he 'could *will* the ball into the cup if he needed a birdie at the 18th'.

Can these consistent winners have powers of PK? Until further study is done, nobody can say yes or no at this point – but the players themselves seem to feel that there is something quite outside the ordinary that affects the way the game goes.

Above: a witch doll. Such an effigy is used to harm a victim by witchcraft. The pin through the doll's mouth means that the victim will be hurt in her mouth. The use of dolls actually to kill by witchcraft is known all over the world

was convinced that people could made themselves better by exerting their minds. He advised patients to say every morning, 'Every day, in every way, I get better and better', and his theories enjoyed a vogue in the 1920s. His method can be seen as a forerunner of the visualisation and positive thinking techniques being used today by healers who try to tap the power of the mind to aid recovery from illness.

In the United States, Carl and Stephanie Simonton run a cancer clinic where they have pioneered new approaches to fighting the disease. Among these are relaxation and visualisation exercises designed to help individuals mobilise their resources to conquer their illness. Those who want to play an active part in their treatment are trained in such methods. Dr Simonton believes he has evidence to prove these have been of great value in many cases.

It is difficult if not impossible to identify objectively any changes that result from many mental techniques. A notable exception, though, is meditation or deep relaxation. Studies have shown that definite, measurable changes occur during meditation and that these changes can have a therapeutic value. The measurable physiological alterations are associated with the autonomic life support functions that lie beyond normal conscious control. A great deal of research has been carried out on transcendental meditation (TM), Zen and other meditation practices in several countries.

Some researchers believe that meditation offers a natural antidote to the stresses and strains of everyday life because it gives the body a chance to dissipate the unwanted build-up of effects resulting from the fight-or-flight response. This response was identified in the 1950s as a legacy from the distant past when our ancestors faced dangers calling for rapid, spontaneous action. Self-preservation dictated that under threat, people either turn tail and run or stand their ground and fight. Either way, the body needs to gear itself up to unleash the necessary energy. In the Western world, running or fighting is unnecessary except in the most extreme circumstances. But the body does not discriminate between the threat posed by, say, an unjust tax demand or a car heading for a collision. They are both threats of a different dimension, but they trigger the same kind of response. This constant physiological process of keying up, without the release of physical reaction, can take its toll.

Meditation provides what has been dubbed the relaxation response by Dr Herbert Benson of the Harvard Medical School. The relaxation response is a quietening down of pulse rate, blood pressure and other physiological regulators. Once the body has been calmed, the mind can purposefully counteract the adverse effects of the fight-or-flight response.

One of the more revolutionary developments growing out of the study of meditation is biofeedback. The idea is to make people conscious of physiological functions (of which they are not usually aware) through machines that monitor these internal processes and give visual or auditory signals of changes. The theory is that it will then be possible to control the physiological processes associated with psychological states.

Maxwell Cade, who teaches classes in biofeedback and described his work in *The awakened mind* (1979), is a scientist who was also trained in Zen. He has carried out research in the fields of biofeedback, healing

Right: Emile Coué (left) advocated that his patients exert mental will to cure themselves and to improve their well-being. Working in France in the first quarter of this century, Coué gained a worldwide following at the peak of his career

and self-healing. Cade believes that biofeedback is a quicker way towards self-awareness and that the technique has therapeutic value as well. Biofeedback, Cade claims, is as effective as hypnotherapy in producing 'almost miraculous relief of symptoms' but gives more lasting results.

Arguably, the preventive and therapeutic aspects of techniques such as meditation, self-help, biofeedback and similar practices are sufficient to command much wider interest among the medical and health-care community. But it is in other areas, especially sport, that their potential has been most avidly seized on, nowhere more enthusiastically than behind the Iron Curtain.

The Soviet Union has developed a branch of applied psychology called psychic self-regulation (PSR). It is a blend of hypnosis, yoga and the martial arts and leads to control of various physiological and psychological functions. East Germany's athletic training programmes include meditation, hypnosis and other related techniques.

Although the United States has not in general embraced such techniques, the United States Olympic Committee has included biofeedback and mental training courses in some of their programmes. In baseball, the Detroit Tigers have used biofeedback and the Philadelphia Phillies have tried TM.

Many individual competitors use mental techniques to help themselves to perform better. They include tennis star Billie Jean King, Olympic 400 metres champion Lee Evans, bodybuilder Arnold Schwarzenegger and high jumper Dwight Stone. They visualise themselves in advance in the winning position, playing the perfect stroke or extracting the maximum effort. We do not yet fully understand how mental techniques help to improve sports performance or conquer disease. But there is no reason why people should not expose themselves to mind-over-body systems. It is a commonplace that most of us live well below our potential both physically and mentally. So perhaps there is a case for considering the techniques that might stretch us to reach new levels of self-awareness and ability.

Arnold Schwarzenegger, world-famous bodybuilder, is one of the few Westerners to use mental techniques in training and performing. In contrast, most athletes behind the Iron Curtain receive psychological as well as physical training

Further reading

Jane Hamilton-Merritt, *Meditator's diary: a woman's experiences in Thailand monasteries*, Penguin 1979

Michael Murphy and Rhea A. White, *The psychic side of sports*, Addison-Wesley 1978

Kit Pedler, *Mind over matter*, Thames-Methuen 1981

An experienced meditator can choose any quiet place to meditate, out of doors as well as in. And many prefer to sit in a yoga posture – this one is the 'lotus'

Meditation has become increasingly popular in the West in recent years, both as a way to cope with the stresses of daily life and as a medical treatment. There are many kinds of meditation techniques, but they all have in common the attainment of a deep relaxation – almost suspension – of the mind and body. Here is one way of meditating that you can try yourself.

First, seat yourself in a comfortable position on a comfortable seat in a quiet room where you will not be disturbed for at least 15 minutes. It is best to keep your feet flat on the floor and your hands clasped loosely in your lap. You should be dressed in loose, comfortable clothing.

Now close your eyes gently and relax your body completely. Do this gradually, starting with the toes and working up little by little to the top of the head.

Breathe in and out of the nose, concentrating until the breathing becomes soft, smooth and regular. If your mind begins to wander, pull it back to your breathing.

Empty your mind of all thought. One way to do this is to direct your mind to a spot on your own body, such as the forehead or right knee, and keep it there. Your breathing will become almost imperceptible.

Remain in this relaxed state for between 15 and 20 minutes.

Open your eyes gently and come out of the relaxed state very slowly. Enjoy the peaceful feeling for a few minutes before standing up. Then stretch slowly from head to toe.

The waiting future

Premonitions and their counterparts, retrocognitions – the paranormal acquisition of knowledge about past events – are well-established psychic phenomena. What, asks ARCHIE ROY, can they teach us about the nature of time?

THE COMMON-SENSE VIEW OF TIME is to split it into a past, which has gone, a future, which has not yet arrived and therefore does not exist, and a present moment, which is our only reality. But even a moment's thought reveals how complex, even contradictory, this seemingly simple notion is. For example, if we ask how 'thick' the present moment is we come to totally nonsensical answers. Is it a millisecond thick, or a nanosecond (one thousand millionth of a second), or is it even a picosecond (one thousandth of a nanosecond) thick? In thinking in this way it is worth noting that a picosecond in relation to a second is the equivalent of a second to 30,000 years! If we continue in this way, we are in danger of causing the whole Universe to vanish into absurdity.

In psychical research it is widely accepted that one royal road to our understanding of the nature of time, and probably also of the nature of human personality, is the study of cases of alleged precognition and retrocognition. Precognition is the paranormal acquisition of information about a future event. That future event may be hours, days or even years ahead in time of the moment at which the precognition takes place. The word 'premonition' is often used to refer to precognition of a future disaster, either personal or public. It should be pointed out that we often obtain information, quite normally, about future events by a process of examination of present trends and knowledge of the laws governing these trends. Thus in the *Astronomical Almanac* there are listed future positions of Sun, Moon, planets and stars – but these are not precognitions. These future events are inferred from past knowledge and are not therefore precognitively predicted. Similarly, we may define a 'retrocognition' as the paranormal acquisition of information about a past event or scene – information that could not have been obtained from records, photographs or accounts of the event.

If one studies the proceedings and journals of societies for psychical research, the cases of ostensible precognitions and retrocognitions may persuade one that both do occur. Some cases are stronger than others;

THE DAILY TE

VOLCANO DISASTER
IN
MARTINIQUE.

TOWN SWEPT AWAY.

AN AVALANCHE OF FLAME.

PROBABLE LOSS OF OVER
40,000 LIVES.

BRITISH STEAMERS BURNT.

One of the most terrible disasters in the annals of the world has befallen the once prosperous town of St. Pierre, the commercial capital of the French island of Martinique, in the West Indies

ing fuller information about the disaster, and of giving whatever assistance may be necessary.

A STORM OF MUD AND FIRE.

From Our Own Correspondent.
WASHINGTON, Friday Evening.

The following cablegram has just been received by the American Government from Consul Aymé at Guadaloupe:

"At seven o'clock a.m. on the 8th inst. a storm of steam, mud, and fire enveloped the city and roadstead of St. Pierre, destroying every house in the city, and of the community not more than twenty persons escaped with their lives.

"Eighteen vessels were burned and sank with all on board, including four American vessels

Time and time again

One of the pioneers of modern research into time was J. W. Dunne (below right), whose books, some easy to read, others of the most mind-boggling difficulty, were published in the 1920s and 1930s.

Dunne's interest in time stemmed from some dreams he had while serving as a soldier in the Boer War. He sometimes dreamed of great disasters that subsequently happened in real life – and dreamed in such detail that if the dream had happened *after* the event, he would have assumed that the event caused the dream. But the dreams *preceded* the events. On 8 May 1902, the volcano at Mount Pelée on the island of Martinique erupted. Dunne dreamed of it beforehand – though, curiously, he later came to the conclusion that he had actually dreamed, not of participating in the disaster itself, but of reading the *Daily Telegraph* report of it (above).

Dunne concluded that such dreams were genuine experiences of events, but somehow *displaced in time*. He set out to develop a theory of time that would allow for this weird phenomenon.

He began with the familiar concept of the block Universe. 'Now' is a slice of this Universe perceived by the self – called by Dunne 'Observer 1'. As time passes, Observer 1 experiences successive slices of the Universe. So far so good. But Dunne's master stroke was to introduce a 'Time 2' to measure the progress of Observer 1 through time, and a corresponding Observer 2, who follows slavishly Observer 1's waking progress but who, when Observer 1 is asleep, is free to range over the whole of Observer 1's life – past, present and future. This hypothesis led Dunne to postulate an infinite regression of times and observers analogous to the regression in Dunne's

some seem to involve information about great natural disasters such as earthquakes, tidal waves and volcanic eruptions, while others appear to relate to man-made catastrophies such as wars and revolutions, train, aeroplane and ship disasters. Many cases seem to refer to disastrous and tragic events that take place in the lives of the percipient and his immediate relations. With some psychics, prediction appears to be habitual – Edgar Cayce, Jeane Dixon, Eva Hellström, Gerard Croiset and Alan Vaughan. There are also occasional predictors, ordinary people who experience one or only a few premonitions of family or personal tragedies or even – seemingly pointlessly – trivial events of their day-to-day lives.

Future disasters

The clarity with which a person foresees a future disaster varies. One may speculate that it may be dictated not only by the strength of the subject's psychic ability, but also by the magnitude of the catastrophe. This may not be directly proportional to the number of people killed or injured; a single death can have far-reaching and unforgettable effects. Many people, even today, can remember the deep emotions aroused by news of the assassination of John F. Kennedy in Dallas in 1963 in addition to the exact circumstances in which they heard the news.

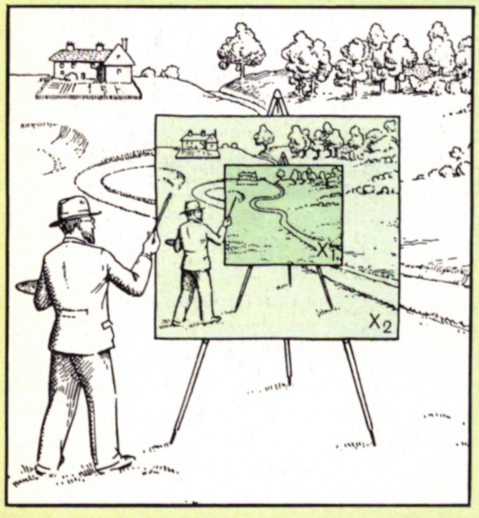
A remarkable collection of alleged premonitions of the Aberfan disaster was made by Dr J. C. Barker, a psychiatrist and a keen student of psychical phenomena for many years. Following his appeal for premonitions of the disaster, he received 76 letters and managed, after thorough investigation, to confirm 24 cases. When pieced together, the details of the premonitions provided a complete blueprint of the disaster – including the name of the village, that the disaster involved the collapse of a huge coaltip and that it would kill many children by enveloping a school so that they suffocated. A remarkable feature of the premonitions was that many of the people experiencing them felt various degrees of unease for varying periods of time before the event. Barker termed this constellation of premonitions the 'pre-disaster syndrome' and concluded that some human beings act like seismographs across time, with an extraordinary sensitivity to future disasters. The parapsychologist J. Gaither Pratt has suggested that such individuals are at least as common as left-handed people.

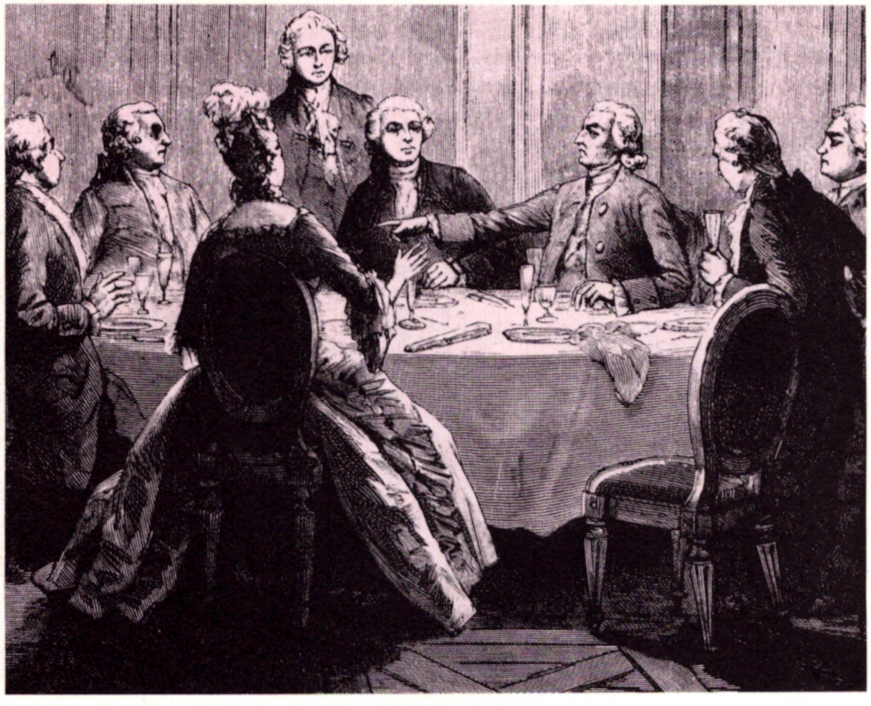
Above: scenes of confusion as emergency workers clear rubble after the Aberfan disaster of 1966. A study of premonitions of the catastrophe showed that there had been a clear 'pre-disaster syndrome' in which many people had felt a growing sense of unease as the event drew nearer. Psychiatrist Dr J. C. Barker has suggested that some people act as seismographs across time, picking up signs of events still distant in the future

One such 'human seismograph' was the Marquis of Cazotte, a fellow of the Society of French Academicians who, at a dinner of the society held four years before the height of the Terror, startled his fellow guests by making a remarkably detailed prophecy of their fates. The prophecy was recorded by the French writer Jean-François de La Harpe. In turn, the Marquis told each one of the guests how they would die – by the guillotine or by slashing their wrists to avoid execution. The Marquis forecast that La Harpe would die a Christian. La Harpe was a confirmed free-thinker, and at this point one of his fellow academicians laughed and said, 'All my fears are now gone, for if we have to wait until La Harpe becomes a Christian then we shall live forever!' Although this story was not published until after the Revolution, reliable witnesses swore it *did* take place before the Terror, and

picture of himself painting himself (below).

Although Dunne's metaphysical arguments were flawed, his work remains an important pioneering study of the nature of time. His experimental findings that precognitive data enter our dreams have been confirmed by later researchers such as Montague Ullman and Stanley Krippner.





Above: the Marquis of Cazotte predicts the death of his companions in the French Revolution at a dinner held some years before the height of the Terror. The predictions were all, apparently, accurate – and the story, if true, is a powerful piece of evidence for precognition

there is some evidence that the tale was known before 1789. If so, it was a remarkable prophecy – for it was accurate in every respect.

At the second international conference of the Society for Psychical Research, held at Trinity College, Cambridge, in March 1978, Professor Hans Bender read a paper describing a prophecy of war that far outdoes the Cazotte vision in its wealth of detail, as well as apparently describing events further away in the future.

In a letter to his family written in 1914, a Bavarian soldier on active service related the strange story of the prophecy of a French prisoner of war. The tone of the letter is jocular and sceptical, as indeed is understandable, for the Frenchman had some curious advice for his captors:

> They should throw away their guns because the war would end with defeat for Germany and her allies. After the war all Germans would become millionaires but they would throw their money from their windows and no one would pick it up because it would be worthless. In 1932 a man would come from the lower ranks to rule Germany and make preparations for a new war. This war, beginning in 1939, Germany would also lose although Italy would enter the war on Germany's side and many German soldiers would die in Italy. In 1945 Germany would be crushed from all sides and split up. The man and his sign would disappear.

In his book *Telepathy and clairvoyance*, the famous Dutch parapsychologist Professor W.H.C. Tenhaeff relates two examples of war predictions from his collection of such cases. In 1929, a Mrs W.R. and her family were visited by one of the sensitives studied by Professor Tenhaeff at their home on the Graaf Ottolaan at Oosterbeek near Arnhem. The sensitive became very upset and confessed that he had visions of all kinds of murder and manslaughter. He also heard ghastly sounds. He saw soldiers in uniform, of a kind he did not know, standing huddled over something like an Ordnance Survey map. He begged Mrs W.R.'s. husband to flee from the house and take everything they owned to safety. In 1944 the fighting in the vicinity was horrifying when the town of Arnhem became the scene of the heroic battle of a division of Allied paratroopers against the Germans. Some of the fiercest fighting took place in and around the houses in that area.

The second case concerned a Mr L.L., who had a recurring dream in which he seemed to be amid a body of men, all in civilian clothes, and yet they seemed to be standing in formation and obeying military commands. There were a large number of details that showed the dreamer that, although he had been in the army, it was not an

Right: piles of banknotes made almost worthless by inflation in the Germany of the early 1930s. A Frenchman captured by German soldiers in 1914 had prophesied that after the First World War 'all Germans would become millionaires but they would throw their money from their windows and no one would pick it up because it was worthless'

army experience that he was recalling in his dreams. Many years later, while he was in Indonesia, he was captured by the Japanese. Interned by them in a camp, he found himself going through the exact events that he had repeatedly dreamed of over the years. Interestingly enough, the dream never again came back after his return to Europe.

The sinking of the liner *Titanic* in April 1912 was an event that created in many the same harrowing emotions of loss, horror, agony and shock experienced half a century later after the Aberfan tragedy. The great liner, widely believed to be unsinkable, sailed on its maiden voyage carrying within it a representative sample of Western civilisation from all classes. Steaming at full speed through the night of 14 April, at 11.40 p.m. it

struck an iceberg that ripped the ship's hull below the waterline.

Professor Ian Stevenson, who collected reports of a number of alleged paranormal phenomena connected with the sinking of the *Titanic* (see page 111), has also suggested that such a disaster may produce psychic shocks by its very unexpectedness. Of Stevenson's 19 cases, 10 were precognitive.

Thresholds of consciousness

In a remarkable study carried out in the 1970s, W.G. Cox examined the theory that, although premonitions of a future disaster may never reach the conscious mind in a recognisable form, it may be strong enough to influence a person's behaviour. Cox selected a number of railway passenger trains involved in major accidents, and obtained data regarding the number of passengers on each train and the total number on the same train on the same run on previous occasions. Analysis of Cox's data suggests that some precognitions of misfortune may be sufficiently strong to cause changes of mind or cancellations without crossing the threshold of consciousness as a full blown premonition. Other investigators have collected numerous examples of cases where a premonition has reached a conscious level without any specified detail being attached to it. Dr Louisa Rhine gives the following example.

> My father was a manufacturer of washing machines and twice a year he would made a trip to the wholesalers and sell them a car load or two of washing machines. He saw dealers in Koekuk and was to take the 10 p.m. train for Davenport. He went to the depot, bought his ticket and then had a feeling that he should not go. It was so strong that he went back to the hotel and stayed in Koekuk overnight. In the morning when eating his breakfast he looked over the paper and found that the train he was supposed to have taken had been wrecked and nearly all the passengers in the smoker were killed. Dad was an inveterate smoker.

Above: an impression by artist David Shepherd of the disastrous battle of Arnhem in 1944. In 1929 a psychic visiting a family who lived near Arnhem experienced a vivid vision of the events of the battle, and became so distressed that he begged the family to leave the area

If the future events in some way exist and cast their shadows before them, especially if they are disasters of some magnitude, so that certain people receive premonitions of such disasters, does it make sense to set up a bureau to which such people could send accounts of their premonitions? Such bureaus have indeed been created, the British one being set up in January 1967 after the Aberfan disaster (see page 110). Mr Andrew Mackenzie has studied the British bureau's cases. In his book *The riddle of the future*, he describes a number of the cases that suggest that somehow information about future events can be obtained – in which case it is difficult to avoid the conclusion that in some way the future is 'there' already. If this is so, what are the implications for the existence of free will?

Timeslips – what can they teach us about the nature of time? See page 1714

Blotting his copybook

The prophecies of Nostradamus (right) have been famous for more than four centuries. Written in *quatrains*, or four-line verses, they are extremely difficult to understand. Certain interpretations have, however, become standard: among the claims made for Nostradamus's verses are that they predict the French Revolution and the accession of an emperor called Napoloron – and, perhaps the most famous of the alleged prophecies, that they forecast the rise of Hister, or Hitler.

A closer look at these enigmatic verses, however, shows them to be far less ambitious examples of prophecy. The reference to the retirement of a great personage to a small place is not a description of Napoleon's exile on Elba, but of the retirement of the emperor Charles V, an event that had taken place shortly *before* the publication of the 'prophecy'. Nostradamus's references to 'Bretaigne' are to Brittany, not Britain – thus predictions of political unrest in 'Bretaigne' do not refer to turbulent periods in Britain's history. And, it turns out, 'Hister' is not a near-miss for 'Hitler' – but means the river Danube.

The turbulent geological history recorded in the Earth's crust shows that the planet's magnetic field frequently reverses. And when it does, as NIGEL HENBEST explains, the results can be disastrous for living things

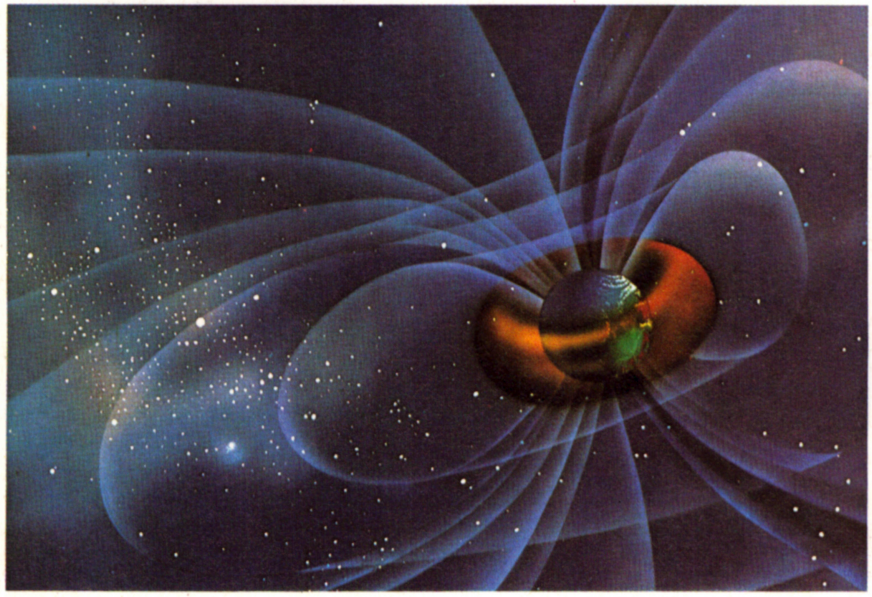
FOR CENTURIES, NAVIGATORS have used a magnetic compass to find their way safely over the globe. The compass needle points roughly north-south, towards the Earth's magnetic poles. One of these lies in the Arctic and the other in the Antarctic. The Earth is like a huge magnet. But it is a very strange one. The magnetic poles wander around the true North and South Poles (the points around which the Earth rotates). And the latest research shows that the Earth can do something no ordinary magnet can: the magnetic field can spontaneously change its direction. If such a magnetic reversal occurred today, the end of a compass needle that had hitherto pointed north would begin to point south.

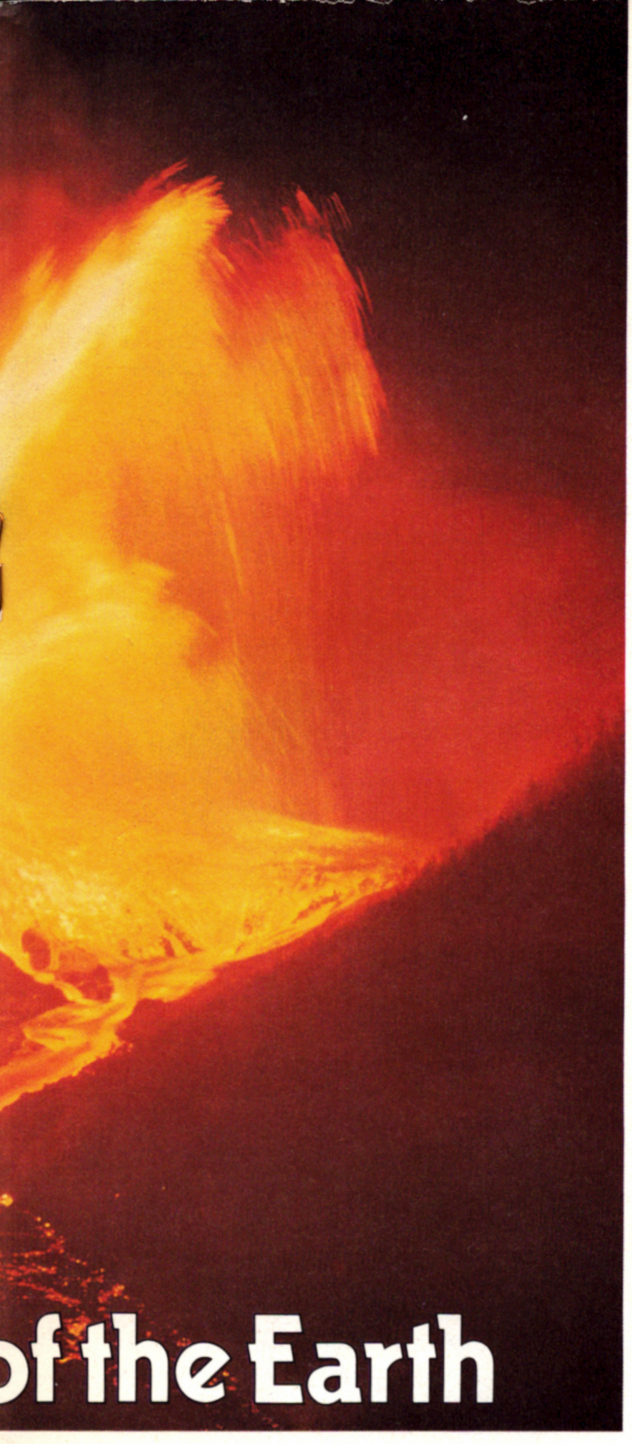
The ancient Chinese discovered the natural magnetism of certain rocks around the first century AD. About 1200 years later Western navigators were using these 'lodestones' as compasses. But it was in the year 1600 that the Earth itself was first thought of as a giant magnet that aligns compass needles. The idea was proposed by Colchester-born William Gilbert, the physician to Queen Elizabeth I. He showed that the Earth's magnetic field resembles that of a magnetised ball with one pole to the north of Siberia, so that a compass needle in London pointed about 11° east of true north. Gilbert also disproved a few old superstitions about magnetism, such as the story that garlic can destroy the powers of a magnet.

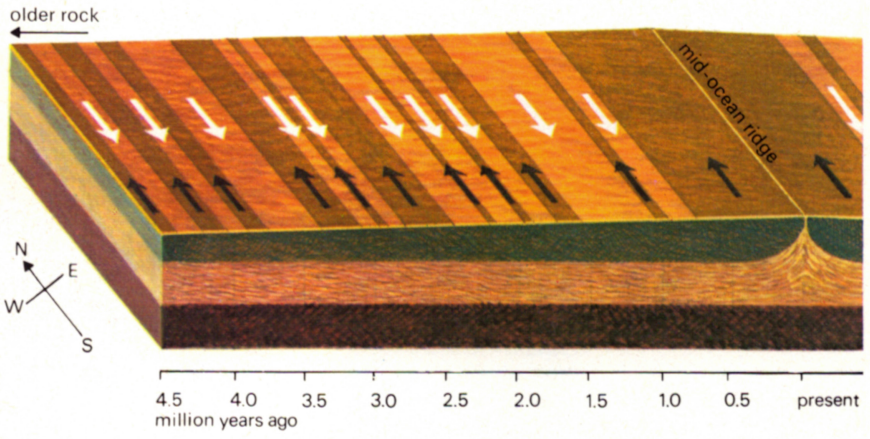
Although no one knew *why* the Earth should be a giant lodestone, the idea seemed quite reasonable. Then in 1634 the English astronomer Henry Gellibrand discovered that a compass in London no longer pointed 11° east of north, but only 4° east. Somehow,

Above: William Gilbert, author of *De magnete*, one of the first works of modern natural science. Gilbert studied the magnetic fields of lodestones (natural magnets) and realised that the entire Earth is one huge magnet

Below: the invisible 'lines of force' of the Earth's magnetic field wreathe the planet. The field guides some of the cosmic rays from space into the atmosphere in the polar regions, giving rise to auroras. But some are trapped temporarily in radiation belts (orange) before reaching the Earth







Molten rock thrown out by volcanoes (left) solidifies with a weak magnetic field induced by the Earth's field. The ocean floors are formed by volcanic activity at the mid ocean ridges and thus become 'tape recordings' of the Earth's magnetic field throughout geological history (above). As the sea floor spreads from a mid ocean ridge the Earth's periodically reversing field magnetises the rock in 'stripes' of alternating direction. Man-made objects that are heated during manufacture or use also become magnetised as they cool: Gilbert made the point in this illustration of a blacksmith at work (below). A salt-drying hearth used in pre-Roman England (below centre) reveals recent changes in the Earth's field and hence the movements of the magnetic poles

the Earth's magnetic field was shifting within the body of the planet. By the 1650s, a magnetic compass in London conveniently pointed due north. The magnetic pole is now among the islands of northern Canada and gradually moving northwards.

Not only does the Earth's magnetic field shift its direction, it also changes in strength. Archaeologists can measure the strength of the Earth's field in the past by investigating ancient kilns and hearth stones. When these bricks or stones are heated and then cool down they pick up a weak magnetism from the Earth's magnetic field. Modern techniques can detect and measure this acquired magnetism, and so permit scientists to calculate the strength and direction of the Earth's magnetism at the period when the kiln or hearth was last used.

The changes that have been discovered by this technique are quite remarkable. Around 4000 BC, the Earth's magnetism was only about half its present strength; but it grew in intensity until around AD 500 it was one and a half times stronger than it is now. Since then the field has been weakening.

Geologists can go back farther in time by looking at the magnetism of ancient rocks. When lava flows cool down, they pick up magnetism from the Earth's field just as kilns and hearth stones do. As geologists in the early 20th century used new sensitive magnetometers to investigate old lava flows, they made an unbelievable discovery. In some places the rocks were magnetised in directions quite different from that of the Earth's magnetism. In some places the rocks' magnetism was in the opposite direction to the Earth's field. As they investigated more lava outcrops, geologists found rocks with 'reversed' magnetism occurring just as commonly as 'normal' rocks. And a pattern began to emerge. Take samples of lava of any one age from anywhere in the world – Iceland, Hawaii, India – and you find they all have the same direction of magnetism, whether normal or reversed. This reversal cannot be a local phenomenon. The Earth's entire magnetic field must be able to reverse itself spontaneously.

Our planet thus has no preferred direction

Left: the power of the lodestone. It consists of magnetite, an oxide of iron. Many other types of rock are magnetic, but much more weakly than magnetite

of magnetism: over its long history, its magnetic field has as often been in the 'reversed' direction as in the present orientation. Our present 'normal' period goes back only 700,000 years: before that there was a 1,700,000-year period of reversed magnetic field; and, going back father, a million years each of 'normal' and 'reversed' magnetism. But as geologists have looked in more detail, they have found that within these main episodes there have been shorter periods of the 'wrong' magnetism. If we add up the total, we find that the Earth's magnetism has in fact flipped over at least 20 times in the past $4\frac{1}{2}$ million years.

During a magnetic reversal, the Earth's magnetism drops dramatically in intensity and then regenerates itself with its direction reversed. The change can take only a few centuries – a mere moment in the thousands of millions of years of geological time. It is difficult to tell how long the older reversals took but in 1971 Australian scientists made the astounding discovery that the Earth's magnetism flipped over to 'reversed' for a short while only 30,000 years ago – a brief interlude in the 700,000 years of the present 'normal' epoch. This change is recorded in the stones of an ancient aboriginal hearth near Lake Mungo. The 'reversed' period lasted only 2000 years, so each reversal of the field could have taken only a couple of centuries.

The origin of the Earth's shifting, twisting and flipping magnetic field is still something of a mystery. Scientists agree that it must arise in the Earth's outer core of liquid iron. Electric currents flow in the molten metal and generate a magnetic field – just as in an electromagnet such as the coil that pulls the hammer on an electric doorbell.

But what causes the electric currents? It is probably the motion of the liquid metal through the core's magnetic field. As long as there is just a little magnetism to begin with, the sloshing of molten metal in the core creates some electric current; this current then produces more magnetic field, which allows the production of further electric current. In fact the core resembles a dynamo, in which electric currents are generated in wires as they move through a magnetic field that is itself generated by the current.

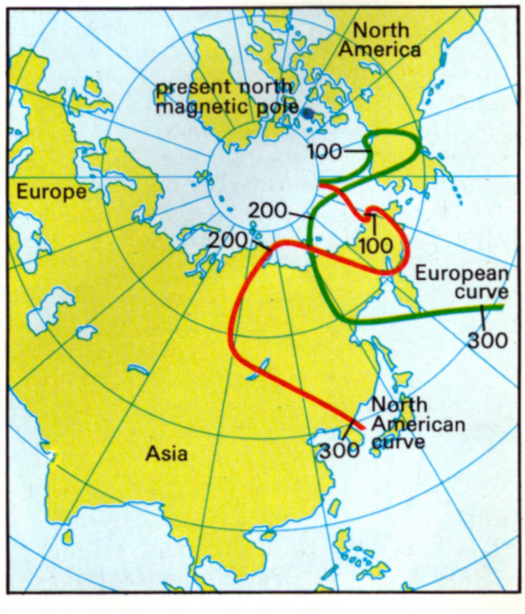
In this maelstrom of entangled magnetic fields, electric currents and super-hot streams of molten iron, it is not surprising that the Earth's magnetic field can change erratically in direction and in strength – or even flip over altogether. But the whole problem is so complicated that scientists cannot possibly predict how the magnetic field will behave in the future, or why it has changed at particular times in the past.

Above: in the 1920s Alfred Wegener suggested that the continents drift over the Earth's surface. The idea was ridiculed for decades, but has now become the orthodoxy of geology

Continents in motion

Although they cannot explain the past flips of the Earth's magnetism, scientists have proved that one of the wildest theories ever proposed for our planet Earth is indeed correct. In the 1920s a German meteorologist, Alfred Wegener, suggested that the continents wander over the surface of the Earth: once they were all joined as a single huge supercontinent, which he named Pangaea ('whole Earth'), but this broke up into fragments that are the continents we know now. Scientists thought Wegener was a crank, and for almost 40 years his ideas lay unheeded.

But by 1960 geologists in Britain and Australia had evidence that forced them to reconsider continental drift. They had studied the magnetism of rocks in such detail that they could calculate the position of the magnetic poles over the past 500 million years. The measurements showed that the poles had apparently moved about. This was not surprising in itself; but the shock came



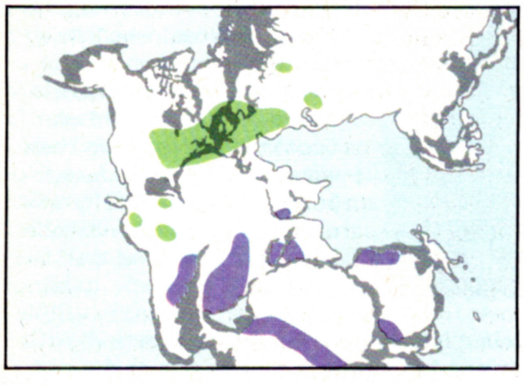
Right: ancient rock magnetism reveals the movement of the north magnetic pole. (The numbers show millions of years in the past.) But European and North American rocks yield different tracks. However, when the tracks are adjusted to compensate for the recent separation of the continents, the two tracks coincide

when they compared data from different continents. The rocks from different continents seemed to show the magnetic poles to have been in different positions at the same time in the past.

There was only one way to make sense of the evidence: what had moved was not the magnetic poles – or not the poles alone – but the continents, and each continent had moved in a different way relative to the magnetic poles. The continents are drifting independently over the globe.

Not all scientists were yet convinced. But magnetism was to provide the final proof of continental drift in a different way. If the continents are separating from one another – say South America from Africa – then new rocks must be coming up at the central crack between them – in this case, in the middle of the bed of the Atlantic Ocean. In 1960 the American geologist Harry Hess pointed out that there is a volcanic ridge lying along the middle of the Atlantic floor, which could mark the split between America and Africa. As the Atlantic widens, new rock wells up here. So each half of the Atlantic sea bed should be a horizontal time chart: rocks at the centre are young, while the sea bed towards either side of the ocean is progressively older.

At the time, there was no evidence to support Hess's theory. But oceanographers had already discovered the vital key, without



realising what they had found: there are strange patterns of magnetism in the rocks of the ocean bed. The directions of the magnetism in the rocks form 'stripes': within a given stripe the rock is magnetised one way, roughly parallel to the mid ocean ridge; in neighbouring stripes the rock is magnetised in the opposite direction. In 1963 two Cambridge geologists, Fred Vine and Drummond Matthews, realised the simple truth. The sea bed is a giant tape recorder. As Hess suggested, new hot rock wells up at the mid ocean ridges; and when it cools it picks up magnetism from the Earth's field, just like any other lava. As the ocean bed gradually spreads, this rock is carried away on either side. If the Earth's magnetism flips over, new rock will show the new direction of magnetisation.

Knowing, from the evidence of continental rocks, when the Earth's magnetic field had reversed, Vine and Matthews could work out what the magnetic pattern in the ocean floor should look like. And indeed, the pattern matches up in every detail. The world's geologists were convinced, almost overnight, that continental drift does occur. Geologists who study the magnetic stripes in the ocean floor have confirmed the pattern of continental wanderings deduced by their colleagues who study the continental rocks.

As the continents have drifted from equatorial regions to polar zones and back, their climates have changed. In the days of the supercontinent Pangaea, some 300 million years ago, the southern extremities of the land, including present-day India and Australia, were at the South Pole and lay under thick sheets of ice. At the same time the far northern shores of Pangaea – modern Greenland and Europe – lay in a tropical climate astride the equator.

Above: the system of plates that make up the Earth's surface and cause the ocean floor to spread and the continents to drift. New material is added to each plate at mid ocean ridges. The plate as a whole rolls like a conveyor belt towards a 'subduction zone' where it plunges into the body of the Earth. The continents, consisting of lighter rock, ride on the plates

Left: the modern explanation of the climatic variations that inspired the pole shift theorists. About 200 million years ago the world's land formed a single supercontinent, Pangaea. Australia, India, southern Africa and southern South America lay with Antarctica near the South Pole, and still show signs of glaciation (blue areas). Europe and North America were tropical (green areas). Here the luxuriant forests of the Carboniferous era had given way to hot deserts, beneath which the world's great seams of coal were formed

While the Earth's magnetism has provided evidence that has solved many of the Earth's past mysteries, its future behaviour cannot be predicted – and it may represent a danger to us. Study of old rocks shows that often, when a magnetic reversal has occurred, many living species have been completely wiped out. The reason is simple to find. The Earth's magnetic field acts as an invisible umbrella to protect us from cosmic rays from the Sun. When the field weakens drastically during a reversal, these rays can get through to Earth and damage the sensitive cells of living things. The extinction of the dinosaurs, among other plants and animals, has been blamed on the burst of cosmic rays that followed a magnetic reversal (see page 1501).

The Earth's magnetic field is dropping in intensity at the moment. No one knows whether this is simply a short-term fluctuation, or if it heralds another magnetic reversal. Even if the trend does continue, there is no need for panic: at the present rate, the reversal is still two or three thousand years away. But sooner or later, Man will have to live through another reversal of our planet's wayward magnetic field, and face the ensuing threat of devastating radiation from space.

Further reading

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John White, *Pole shift*, Doubleday (New York) 1980

Light through the window

A young couple, Caroline and Peter, who were renovating an old stone post office in the Cornish village of Newmill, came face to face with a luminous green and red object one night in 1977, which they later described as a 'UFO'. Almost immediately after the sighting they were both taken so ill that they had to be treated in hospital. Could their illness have been radiation sickness, induced by the effect of some form of natural radiation channelled through the stone of their house?

The existence of window areas has been hotly debated even by those interested in the paranormal – but, as JENNY RANDLES shows, there now seems to be some scientific evidence for their authenticity

ARE WINDOW AREAS REAL? Many modern researchers would certainly argue that they are. Bernard Delair, a British UFO expert who works on the archives of Contact UK – the world's largest UFO society – has a working background in geography and has taken this problem very seriously. His own research began with a study of the temporal distribution of UFO 'flaps'.

Delair was able to identify two cycles, one of 10 to 11 years, and another of 4 to 6 years. Tracing these back into history, beyond the supposed beginning of the UFO phenomenon with Kenneth Arnold's 1947 sightings (see page 4), he found definite indications of a phenomenon that manifests itself in a cyclic fashion, being much commoner at certain times than at others. Further research that Delair has carried out in conjunction with Ahmad Jamaludin has even revealed a geographical progression for these waves and explained some of their intricacies. Delair and Jamaludin believe that it is possible to predict where and when UFO activity will be strongest: in South America in 1982, in the central Americas in 1983 to 1984, in north America in 1985 and 1986, in northern Europe, possibly including Britain, in 1987, and in southern Europe in 1988. It will be interesting to see how many of these predictions turn out to have been accurate.

Delair has also carried out a mammoth survey of tens of thousands of reports recorded on computer files in the USA and Britain. His analysis of these reports led him to conclude that he could identify dozens of window areas in many countries.

The attempt to establish scientifically that window areas exist goes on. But if they *do* exist, what are they? Is a window area generated by the physical features of the region itself, or does the region attract some

outside force? It seems that the first theory is more likely to be true. Delair has not missed the correlation between his primary wave cycle – 10 to 11 years – and the cycle of maxima and minima in sunspot activity. In fact, his comparison shows that the occurrence of these two things matches so closely that one is led to conclude that there must be some connection between sunspot activity and peaks and troughs in the occurrence of paranormal phenomena, especially UFOs.

Analysis of UFO flaps can tell us still more. The French scientist Dr Claude Poher decided to look at the reports during the big French flap of 1954. He compared the varying declination of the Earth's magnetic field with the number of UFO reports. The resultant graph leaves little doubt that there is a correlation. It seems that UFO activity and geomagnetic disturbance are linked.

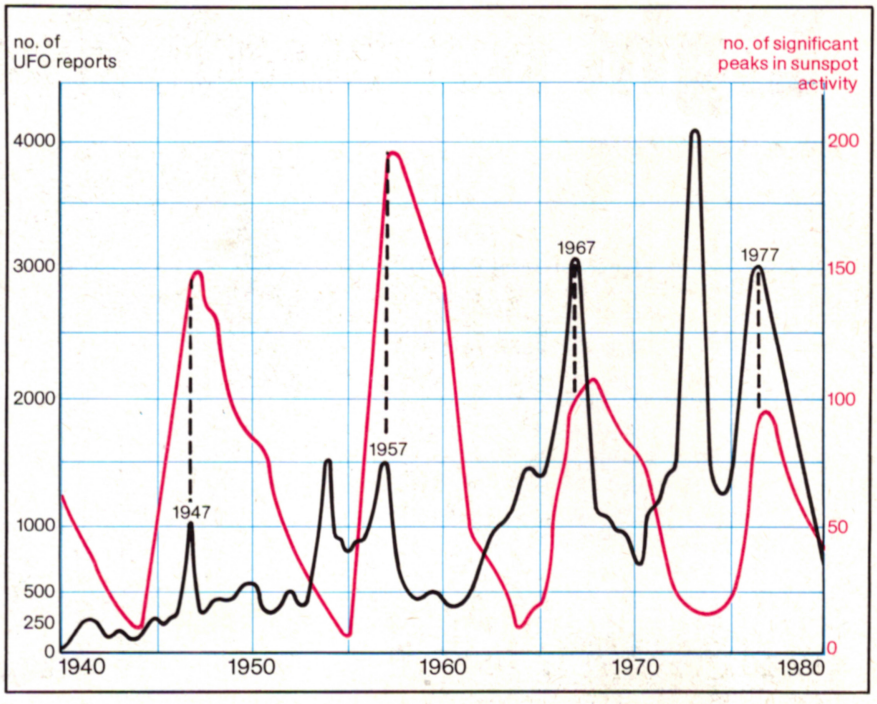
Poher discovered one more important point. Forty per cent of the cases in this flap occurred within 1100 yards (1 kilometre) of a fault zone – a part of the Earth where the subsurface rocks are impacted against one another. Indeed, fully 20 per cent occurred *on* fault lines. This could be a highly significant finding; it has been confirmed in a study of the Spanish flap of 1968. A similar result has been obtained by researchers on the Dragon Project in England, who have found that almost all megalithic sites in the British Isles are within 1 mile (1.6 kilometres) of a fault line (see page 1608).

Magnetic attractions

Meanwhile, in Canada, Michael Persinger and Ghislaine Lafrenière (see page 1608) have gone beyond the study of simple UFO reports. They have correlated many different kinds of anomaly with variations in the electromagnetic field strength. They feel confident that this demonstrates not only the validity of the window area concept, but also its relationship with electromagnetic radiation.

One of their proposals is of particular interest. They suggest that underground at window area sites there may be bodies of highly conductive material buried in the rock strata. During increased solar activity this normally dormant mass could, they claim, become electrically charged and generate a large electromagnetic field around it. This would account for the geomagnetic deviations, and the field would also be detectable at the surface. This massive 'superfield', they suggest, could have the strength to generate luminous effects in the atmosphere – the balls of light so common at window areas – and more peculiar effects in individuals who happen to be in the area when the superfield is active.

It is known that messages are carried in the brain by means of electrical impulses, and it is quite possible that contact with an intense superfield could cause some people to experience a kind of 'brain scrambling'



Top: a graph showing the correlation between sunspot activity and UFO 'flaps', as proposed by British UFO researcher Bernard Delair (above). Only the years 1940 to 1980 are shown, but the peaks in UFO activity since 1700 seems to occur every 10.2 years, while the sunspot cycle averages 10 to 11 years. According to this theory the next UFO flap in Europe should occur in 1988

– electrical interference that could result in hallucinations. It is believed that certain forms of electromagnetic radiation can be 'heard' inside the head as a humming or buzzing sound. Is it mere coincidence that humming is the sound, usually on the threshold of audibility, that is most often associated by witnesses with the onset of a paranormal experience? Electromagnetic fields can also produce subsidiary effects such as malfunction of electrical equipment, overtiredness and headaches or nausea. It is interesting to consider all this in the light of the following example.

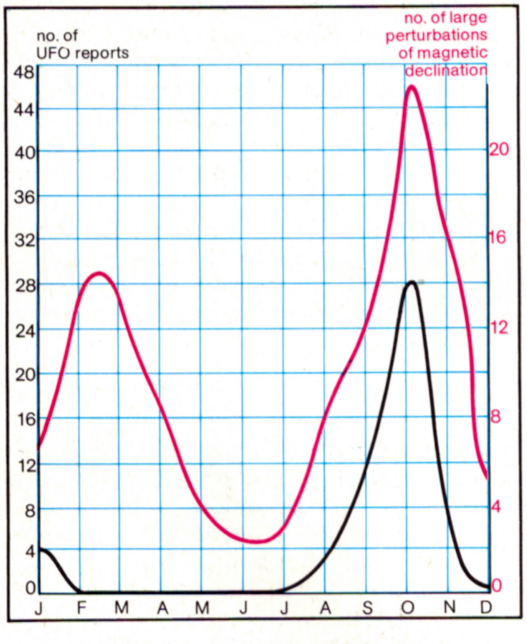
During September 1977 a young couple, Peter and Caroline, were renovating a post office in the Cornish village of Newmill. One evening, Caroline went outside and came face to face with a luminous green and red object about 6 feet (2 metres) in diameter. She called Peter, and they both saw the object float up the ramp of a barn behind the house and zig-zag across a field. It then drifted across the moors, coming to rest about a mile (1.6 kilometres) away, where it stayed for some hours – and was witnessed by around 30 people. The following evening, four similar objects appeared. They were again witnessed by several people.

Both Caroline and Peter subsequently had to be treated in hospital. They had stomach pains, headaches and nausea. No cause was found for this mystery illness, which seemed to be in some ways similar to radiation sickness; after a week it disappeared of its own accord.

It is possible that a massive rock body under the surface may have been responsible for the light ball effect in the atmosphere. The stonework of the old post office could even have channelled this effect as a lightning conductor attracts lightning. Close contact

between witnesses and the ball of light may have induced the illness through possible attendant microwave radiations. It is interesting to note that others who saw the object from a greater distance apparently suffered no ill effects.

This case suggests ways in which a superfield could affect the brain. The ball of light, although itself real, could become the starting point of a complex hallucination, stimulated by the intense radiation of the superfield. If the superfield led the electric channels of the brain to overload temporarily and 'short circuit', thus causing the conscious brain to 'switch off', hallucinations experienced during the subsequent period of unconsciousness might be triggered by the sensory input being given to the brain immediately preceding loss of consciousness. And so the brain might spin a fantasy around this sensory input and its own stored knowledge of UFOs. If the witness does not interpret what he sees immediately before losing consciousness as a UFO, or if indeed he sees nothing, then the resultant fantasy could take any form, and would probably be associated with his own personal beliefs or fears, or whatever he happened to be thinking about just before the superfield struck. If such a loss of consciousness were fairly short and the witness had no previous experience of blackouts, he might regard the intermediary dream or hallucination as real.



Some researchers believe they can explain *all* visionary experiences in this way. Some light may be thrown on the matter by study of the medical condition known as epilepsy. This is a temporary 'brainstorm' during which the sufferer loses consciousness for a short time and can continue afterwards not realising he has had an attack. The interesting thing is that hallucinatory dreams are a feature of epileptic blackout periods. Perhaps the superfield leads to a kind of mass 'super epilepsy' in which large numbers of people suffer the same hallucination. While some witnesses of window area phenomena do not suffer hallucinations but *do* see some of the attendant phenomena, such as balls of light, and may also suffer physical side effects, others become unconscious. Time loss appears to be an important feature of UFO contact experiences, and time loss would of course occur if a blackout period were missing from conscious recall.

Left: a graph showing the correlation between the French 'humanoid' flap of 1954 (above: Marius Dewilde, who had a famous close encounter of the third kind in 1954, seen outside his home at Quarouble) and the incidence of magnetic storms. This analysis was the work of the French scientist Dr Claude Poher, who also discovered that 40 per cent of the sightings during the flap occurred within 1100 yards (1 kilometre) of a geological fault zone – and 20 per cent actually on a fault line. Does close proximity to these areas at certain times induce hallucinations – of UFOs, ghosts and other paranormal phenomena?

Earthquake lights

Another possibility is that window area phenomena are produced directly by the movement of rocks under the Earth's surface. This work took on a new importance when the findings of a group of scientists in Canada and the USA were released during early 1981. They had examined the piezoelectric effect, in which pressure or tension applied to certain types of crystal, such as quartz, induces an electrical potential. They suggested that stresses in the quartz crystals of certain types of rock might induce electrical activity in the surrounding atmosphere when the rock was under strain, as in Earth movements. Ionisation effects might even be visible as glowing light, rather like a UFO. The scientists decided to test this remarkable idea in the laboratory and found that they could indeed duplicate it. It does seem possible, therefore, that in a laboratory the size of the Earth the effect could be large enough to create realistic UFOs in the skies above fault zones. Indeed, what are known as

Above: the scene of the Newmill sighting and (below) Laviano, Italy, which was completely destroyed by an earthquake in 1980. Do they represent two aspects of the same natural effect that in one case releases electromagnetic radiation (seen as a 'UFO') and in the other rips apart the Earth's surface?

'earthquake lights' have been reported immediately prior to a number of both major and minor Earth movements.

Already this theory has been invoked as a possible explanation for the mystery lights seen and photographed over Kaikoura in New Zealand in December 1978 (see page 58). This area has a high incidence of Earth movements.

If this theory is to be acceptable, it should be possible to use it to predict the location of window areas. It is interesting to note that, while Britain is geologically rather inactive, two of the major fault zones, where earthquakes are most likely to occur, cut across Loch Ness in Scotland and Stoke-on-Trent in central England. Loch Ness is host to many weird phenomena quite apart from its monster, and Stoke has for some years been the centre of an inexplicably high number of UFO close encounters. But perhaps the piezoelectric superfield theory in some way holds the answer.

The window opens wider

There are many possible consequences of this intriguing idea, not least the wealth of experiments it suggests. In the paranormal world, rigorous scientific experiment is all too rare, and serious researchers will be grateful for the chance this theory offers for scientific testing. Some students of leys have also been intrigued by the idea, and have attempted to measure electrical effects at megalithic sites; notable research has been carried out in England by workers in the Dragon Project at the Rollright circle in Oxfordshire (see page 1608).

It could be that these electromagnetic anomalies can also explain some curious photographic results that some researchers have obtained at megalithic sites (see page 1606) and window areas. Using infra-red film they have from time to time obtained unusual light effects and strange images, although nothing was visible to the naked eye on these occasions. It seems that the images were detectable only in the infra-red part of the spectrum – but it could be said that these pictures are further scientific evidence for the superfield.

It does seem that, if window areas really do exist, the concept of the superfield may offer a plausible working hypothesis on which to base investigations of the paranormal world.

Further reading

Lawrence Kusche, *The Bermuda Triangle mystery – solved*, New English Library 1975

M. Persinger & G. Lafrenière, *Space-time transients and unusual events*, Nelson-Hall (Chicago) 1977

Jenny Randles & Paul Whetnall, *Alien contact: a window on another world*, Neville Spearman 1981

Arthur Shuttlewood, *The Warminster mystery*, Neville Spearman 1965

The ravening beast

In a remote district of 18th-century France there stalked a marauding beast so terrible that its bloody deeds have passed into legend. GREGORY PONS recounts the horrifying ravages of the beast of Gévaudan

SOME 200 YEARS AGO the people of Gévaudan, a district in Lozère, south-east France, had a peaceful existence. Peasants and shepherds, they eked out a living in the pastoral quiet of tiny, remote villages. Little did they expect that their area would become known far and wide as the hunting ground of the terrible scourge called the beast of Gévaudan. This monstrous animal shattered the calm rhythm of their life for more than three years – and, more than two centuries after these events, the memory of that nightmarish creature still makes people shudder.

It all started in June 1764 in the Merçoire forest near Langogne in the eastern part of Gévaudan. A young woman was out watching her cows when suddenly she saw a hideous beast charging at her. Her dogs fled and she would have been devoured had not the cows kept the monster at bay with their horns. The cows were able to repel a second charge, and the lucky young woman got away with a few scratches, torn clothes and a bad case of nerves.

The horrified villagers heard a frightening description of the beast from the shaken victim. It was about the size of a cow, with a very wide chest, a huge head and neck, short straight ears and a nose like a greyhound. Two long fangs protruded from each side of its black mouth. Its tail was long and exceptionally thin and it had a black stripe running from the top of the head to the tip of the tail. She also said that it moved at a high speed in bounds of as much as 30 feet (9 metres). Could it be a gigantic wolf?

In the months that followed, terror swept the region. The beast attacked the weakest prey: women and children and unaccompanied men who took the livestock out to pasture in the hillsides. Many were devoured

Below: a panoramic view of the Margeride mountains in the district of Gévaudan, south-eastern France. For about three years, a beast terrorised the villagers – maiming, devouring and wantonly killing a great many people

Below right: the bloody exploits of the beast of Gévaudan became the subject of many articles in the press of the day

FIGURE
DE LA BÊTE
FAROUCHE
ET EXTRAORDINAIRE, QUI DÉVORE LES FILLES
Dans la Province de Gévaudan, & qui s'échappe avec tant de viteſſe, qu'en très-peu de tems on la voit à deux ou trois lieues de diſtance, & qu'on ne peut l'attraper ni la tuer.
EXPLICATION.
On écrit de Marvejols, dans la Province de Gevaudan, par une Lettre en date du premier Novembre mil ſept cent ſoixante-quatre ; que depuis deux mois il paroit aux environs

and carried off. Perhaps worse, people found half-ravaged dead bodies and torn-off limbs scattered about. As its massacres continued unabated, the creature came to be thought of less and less as a wolf-like animal and more and more as an invulnerable fiend. When people referred to 'the beast', everyone knew what they meant.

Above: the beast, seemingly invulnerable, grasps a victim despite the presence of armed men. Very few survived an assault by the beast – and those that did were liable to be left mad by the encounter

Right: the dragoons were finally called in to kill the beast of Gévaudan. But even the crack marksmen and the bravest of the king's dragoons proved powerless against the creature

In the grip of fear

The fear spread all over Gévaudan as the beast criss-crossed the Margeride mountains, leaving a trail of carnage. Panic set in. People barricaded themselves in their homes, not daring to take the livestock out to pasture or to go through the wood alone. The peasants had no firearms of any kind and felt that they could do little against the monster with the weapons they possessed – a cudgel studded with spikes, a three-pronged fork and a bayonet. Nonetheless, they formed teams of beaters and tried to track the beast day after day.

Some of the more privileged did have guns, among them the hunters attached to the noble houses of the region. Even guns seemed to be useless, however, for when the hunters shot at the beast, it seemed to remain unharmed. Every new story made the legend – and the fear – grow.

On 8 October 1764 two hunters saw the beast and shot at it from only 10 paces. This time the creature fell, but got up again immediately. The hunters shot once more – and once more the beast fell. But, though unsteady on its legs, it moved into a nearby wood ahead of its enemies. As it ran away, the hunters shot at it twice more – each time it fell and rose again. Despite all this, the beast managed to escape. People were sure that it had been sorely wounded and that it would be found dead the next day. Instead, to their great horror, several more victims were killed in the following days. From this episode the legend arose that the beast of Gévaudan could 'charm' firearms.

The next month a Captain Duhamel took firm control. He organised enormous beats with every available peasant, led by his dragoons – 40 on foot and 17 mounted. All efforts were useless. The beast proved too quick and too intelligent to let itself be caught in a trap. Many times Duhamel's dragoons thought they had succeeded in killing it – but every time the beast managed to escape.

A large reward was offered for the capture of the beast, and this brought hunters from all parts of France to Gévaudan in the hope of winning the money. Their hunt went on for months. In the end the peasants became disgruntled: they had had enough of the dragoons, who ate their bread, trampled their fields and invaded their houses. As if the beast sensed the bad feeling between the populace and the soldiers and hunters, it launched into a massacre more terrible than

before – right under the noses of the dragoons.

By this time, stories of the beast of Gévaudan had reached other countries of Europe. This prompted King Louis XV to action and he sent a certain Denneval to the district. Denneval was a hunter reputed to have killed 1200 wolves. He began tracking the beast with six of his best bloodhounds near Malzieu in February 1765.

And now the Denis family came into the picture – a family whose fate was to be painfully linked to the history of the beast. The family comprised the mother and father; two daughters, Julienne and Jeanne, in their twenties; and two sons, Jacques, 16, and Sylvain, 10. They were neither poor nor rich; they owned a few cows, sheep and goats, which the children took care of. They lived

just outside the village of Saint-Privat-du-Fau, at the foot of the Margeride mountains. They had heard about the beast's massacres the previous autumn and prayed that they would be spared. But this was not to be.

In March 1765, when Denneval had been in the area for a month, the three older Denis children were watching their livestock near Malzieu. Jacques had lit a fire under a rock and Julienne had wandered away for a moment. Suddenly Jeanne let out a great cry. The beast was upon her, seizing her by the head. Jacques, somehow imbued with superhuman strength, saved her by throwing the beast into the fire and holding it over the hot coals. But the beast, howling, got away. Jeanne was left with two gaping wounds, one behind each ear, and a torn shoulder. But worse, she went mad, never to recover her sanity. She remained a quivering wreck and experienced sudden, intense bouts of terror that made her scream, as if the fangs of the beast had become permanently clamped around her head. Julienne never forgave herself for not being there to help. 'Now it is either the beast or me,' she declared. And she could often be seen clambering up the slopes of Malzieu as if to provoke a fatal confrontation with her sister's attacker.

Jacques Denis, vowing to avenge Jeanne, joined up with Denneval and they became friends. The renowned wolf hunter developed a strategy different from the great beats of Duhamel. He thought that beating served only to make the beast more and more wary, and advocated trying to gain its confidence by letting it come out into the open of its own accord. Then, on a given signal, he and his team would try to encircle it, trapping it with the dogs.

This strategy worked no better. The beast knew the region too well and was too clever. It scrambled up the slopes, took cover in a wood, sheltered in a thicket, hid in a ravine, crossed a river. All the while it was pursued, often at its heels, by scores of men and dogs, soon left exhausted by this mad race over the rough terrain. The beast always evaded the hunters, leaving in its path a trail of slaughtered children, rent bodies and strewn limbs. Then, on 29 April 1765, two months after the arrival of Denneval, a nobleman called de la Chaumette spotted the beast not far from his home, between Rimeize and Saint-Chely. He saw the monster stalking a shepherd in a pasture and called his two brothers; the three of them took guns and went to lie in ambush below the pasture. One of the three went into the pasture and by some ruse got the beast to move towards the other two. They shot at it. The beast collapsed on the ground and rolled over two or three times. De la Chaumette fired again. The beast rolled towards the wood, managed to gain shelter and fled. Great splashes of blood stained the soil and bushes all round.

The beast clearly had been wounded and everyone hoped it had gone away to die alone somewhere in the wood. But again it was a false hope. All too soon the beast was back at its bloody work.

On page 1698: the people of Gévaudan fear that the killings are the Devil's work

The beast often aimed for the head of its victims, as it did when it mauled young Jeanne Denis. Being weaker, women and children most frequently came under attack by the beast

Post script

Your letters to THE UNEXPLAINED

Dear Sir,
After reading 'A hitch in time' in issue 70 of *The Unexplained* I am relieved to discover that I am not alone in experiencing timeslips. In fact, I know what it feels like to appear in another time – in other words I know what it's like to be a ghost.

The first, and most impressive, of my timeslips took place on 9 May 1978 in Hull: I couldn't sleep; I was very restless and full of energy. At about 11.40 p.m. I suddenly felt a strange urge to concentrate my energy – although I didn't know what on, or why. But as I did I felt as if I were going into a deep trance. I was being drawn into something and I could hear a distant humming and hissing sound as whatever 'it' was drew closer. I began to get frightened, then experienced a tingling sensation – very much like static electricity moving up through my body into my head. At this point, in my mind's eye, I 'saw' a beam of light going through my head. I felt as if I was being 'frazzled' by thousands of small electric shocks. The only way I can describe this sensation is by saying that it was like eating the children's 'exploding' sweet called 'gunpowder'. I fought the feeling, only to have it intensify.

In the end I gave way to the feeling, which changed into an ecstatic sensation as if I were very high up, on a mountain peak – yet I felt that if I took one wrong step I would fall and be lost for ever. I had no sense of time during this phase of my experience; it could have lasted a matter of moments or hours, but then I suddenly found myself standing in a large room I did not know.

I was standing on a colourfully patterned Indian carpet, which did not quite cover the floor, revealing a beautiful polished wooden floor beneath it. I then felt the floor vibrate slightly as someone came in. I stood perfectly still facing the fireplace until a man walked past me. He was very fat, with a long beard, and to my surprise he seemed to be dressed as a Canadian fur trapper. He stopped directly in front of me, but facing towards the windows. He cried out in glee and clapped his hands, turning to look back at the door. Just at that moment I had the strange feeling that I could read his mind, and I knew that he had just arrived in Hull and was looking forward to a few days' break. Then I saw a lady in a stiff black dress with a white bustle entering the room carrying a tray with a glass of some kind of alcoholic drink on it. The Canadian's eyes followed the woman across the room to the windows. She opened the French windows and the Sun poured in, warming me. I could see spring blossom through the window, which led to a veranda (we were apparently in an upstairs room), beyond which I could make out green meadows and lots of trees covered in white blossom.

My attention was drawn back to the Canadian man who I realised had just seen me. It struck me that if he hadn't thought it unmanly he would have screamed. I saw out of the corner of my eye that the lady had put the glass on the table out on the veranda and had turned to come back into the room when she also saw me. She dropped the tray and screamed.

I wanted desperately to communicate with them and calm their fears so I raised my arm, palm open in a gesture of friendship – but it seemed as if it took all my willpower and drained me of energy. I noticed I was breathing heavily. I then tried to speak but all that came out was a terrible groan as if I had been partially paralysed. At that point the room vanished and I was back in my familiar surroundings.

All the next day I was totally exhausted.

Yours faithfully,
J.A. Taylor (Miss) Hull, N. Humberside

Dear Sir,
With reference to Andrea Burwall's letter in Postscript in issue 25 of *The Unexplained*; I had a similar experience about 15 years ago.

I was resting on my bed one hot Sunday afternoon. Suddenly a beautiful young woman appeared at the end of my bed; she had blonde hair and wore a sky blue dress. She smiled at me and in a soft voice told me to go to my son, referring to him by name. Then she drifted away and left me with a deep sense of peace and tranquillity.

I went into my five-year-old son's room – and found him unconscious in bed. My husband and I rushed him to hospital where he recovered. I believe I saw the Virgin Mary and that her appearance saved my son's life.

At that time I wasn't a very religious person. Now I am a devoted Christian. I saw the Virgin Mary again four years ago, when I was kneeling in a church. She was also kneeling and praying with me.

Andrea Burwall is the first person I have come across who has had this experience.

Yours faithfully,
J. Kruise (Mrs) Ridgehaven, Australia

Visions of the Virgin are, however, quite common – as Kevin McClure shows in his articles in issues 78 and 80 of The Unexplained.

Dear Sir,
I should like to tell you of an experience I had early in 1980.

I was cycling home from a friend's house quite late one night when the front and back lights of my bicycle suddenly flickered, then went out altogether. I checked both lights and could find nothing wrong.

When I looked up I saw a bright, whitish light that appeared to be coming from behind a small hill further along the road. I got back on my bike and started to ride towards the hill – but when I was only about halfway there the light grew much brighter and then a ball of light rose up from behind the hill. I stopped and stared at the object in amazement.

The ball of light moved towards me and soon was hovering directly over my head. It held that position for about 30 seconds, then started to move off at an angle of about 45°; as it did this the glow grew dimmer and certain details of the craft became clearer: it was roughly spherical with a double row of lights along the bottom, which were flashing on and off.

The craft then shot upwards and soon disappeared from view. I looked down and noticed that the lights on my bike had come back on; I remounted and rode home as quickly as possible.

Yours faithfully,
M. Brown Wallsend, Tyne & Wear

Send *your* letters to THE UNEXPLAINED, Orbis House, 20–22 Bedfordbury, London WC2N 4BT

THE WORLD'S MYSTERIOUS PLACES

25 Turtle effigy, Canada

This huge figure of a turtle, 135 feet (41 metres) from head to tail, lies picked out in stones on the plains of Saskatchewan close to Big Muddy Lake, 8 miles (13 kilometres) west of Minton. Its age is unknown; it may have been built by the Saulteaux Indians, who regarded turtles as sacred.

26 Rollright Stones, England

Situated 20 miles (32 kilometres) north-west of Oxford, the Rollright Stones form a near-perfect circle. Nearby stands a 27-foot (8-metre) outlier, the Kingstone, and a quarter of a mile (400 metres) away is an impressive dolmen known as the Whispering Knights.

27 Legananny dolmen, Northern Ireland

This dolmen, at Dromara in County Down, Northern Ireland, is impressively situated at a height of 850 feet (260 metres) above sea level. The massive capstone is over 10 feet (3 metres) long; the amount of effort that must have been required to erect the megaliths is phenomenal.

28 Mount Shasta, California, USA

Green and red snows have reportedly fallen in the vicinity of Mount Shasta, an extinct volcano in northern California. Inhabitants of the town of Weed, 10 miles (16 kilometres) to the West, have reported seeing white-robed figures wandering among gold-domed marble buildings on its slopes.

29 Okanagan Lake, Canada

Okanagan Lake, situated high in the mountains of southern British Columbia, has been the site of reported sightings of a lake monster known as Ogopogo since the mid 19th century. Like the Loch Ness monster, Ogopogo has allegedly been often photographed – but remains elusive.

30 Standing stone, Vermont, USA

Vermont is scattered with mysterious standing stones, most of them unrecognised as such and unmarked on maps. Controversy rages as to whether they really are megalithic monuments – some people claim that this extraordinary stone is merely a gatepost of the colonial period.

31 The gardens at Bomarzo, Italy

The weird gardens of Bomarzo, 15 miles (24 kilometres) north-east of Viterbo in central Italy, were built 500 years ago by the noble family of Orsini. Packed with grotesque allegorical statues bearing cryptic messages in classical languages, the gardens exude a powerfully malignant atmosphere.

32 The Arab city of Gedi, Kenya

Situated 10 miles (16 kilometres) south of Malindi on the coast of Kenya, the now deserted city of Gedi was founded by Arab traders in the late 13th or early 14th century. The inhabitants were driven out of the city by nomads from Somalia – although when and how remains unknown.